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202602UECM3463OE1b

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Started on	Thursday, 26 February 2026, 08:10 PM
Completed on	Thursday, 26 February 2026, 08:10 PM
Time taken	8 secs
Grade	**0** out of a maximum of 10 (**0**%)

1

Marks: 1

The probability density function of loss amounts is given by

$$f(x) = 8(480-x)^7/480^8, \quad 0 < x \le 480$$

An insurance coverage for these losses has an ordinary deductible of 100 Calculate the mean excees loss at 100. _____

Answer:

[   ] ✗

Make comment or override grade

Incorrect
Correct answer: 42.222222
Marks for this submission: 0/1.

2

Marks: 1

You are given:

- Auto liability losses for a group of insureds (Group R) follow a Pareto distribution with $a = 6$ and $\theta = 220$.
- Losses from second group (Group S) follow a Pareto distribution with $a = 6$ and $\theta = 300$.
- Group R has an ordinary deductible of 242, while Group S has a franchise deductible of 375.

Calculate the amount that the expected cost per payment for group S exceeds that for Group R. _____

Answer:

[   ] ✗

Make comment or override grade

Incorrect
Correct answer: 417.6
Marks for this submission: 0/1.

3

Marks: 1

The distribution of X is specified by it's hazard rate function
$$h(x) = xe^{-0.2\,x}/ \int_x^\infty s\, e^{-0.2\,s}\, ds,\ x > 0$$
Determine the average payment per loss under a policy with 3 franchise deductible. _____

Answer:

[   ] ✗

Make comment or override grade

Incorrect
Correct answer: 0.0004
Marks for this submission: 0/1.

4

Marks: 1

Let X be a discrete random variable with probability generating function
$$P_X(z) = 0.41z^{220} + 0.25z^{660} + 0.23z^{1100} + 0.08z^{1540} + 0.03z^{1980}$$
Calculate LER(1,200). _____

Answer:

Incorrect
Correct answer: 0.926752
Marks for this submission: 0/1.

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5 📝

Marks: 1

An individual losses has the Pareto distribution with parameters α = 3 and θ = 170 with deductible of 60.5, coinsurance of 75% and a loss limit of 121.00 (before application of the deductible and coinsurance) are applied to each individual loss. Loss sizes are affected by 10% inflation. Determine the variance of the loss payment on the per payment basic. _____

Answer:

Incorrect
Correct answer: 248.48
Marks for this submission: 0/1.

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6 📝

Marks: 1

In a major college football program, the revenue from ticket sales for a home game is being modeled as a Pareto distribution with α = 5 and θ = 1,600,000. For each home game, the coach receives a bonus only if revenue exceeds 1,120,000. The amount of bonus is 6% of the revenue in excess of 1,120,000. If there are 6 home games in each football season, calculate the expected bonus the football coach receives each football season. _____

Answer:

Incorrect
Correct answer: 17241.172879
Marks for this submission: 0/1.

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7 📝

Annual losses follow a Pareto distribution with $\alpha = 4.20$ and $\theta = 1,850$. Calculate $VaR_{0.901}$. _____

Answer:

[   ] ✗

Make comment or override grade

Incorrect
Correct answer: 1358.53075
Marks for this submission: 0/1.

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8 📝

Marks: 1

Annual losses follow a Pareto distribution with parameters $\alpha = 5$ and $\theta = 900$. $TVaR_p = 1,044$, Determine p. _____

Answer:

[   ] ✗

Make comment or override grade

Incorrect
Correct answer: 0.935095
Marks for this submission: 0/1.

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9 📝

Marks: 1

The losses experienced by an insurance company have the following probability distribution:

Loss size	Probability
0	0.60
180	0.25
280	0.10
1,360	0.05

Calculate the $CTE_{0.68}$. _____

Answer:

[   ] ✗

Make comment or override grade

Incorrect
Correct answer: 395.625
Marks for this submission: 0/1.

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10 📝

Marks: 1

Annual losses follow a Gamma distribution with parameters $\alpha = 3$ and $\theta = 900$. $VaR_{0.95} = 5666.21$, Determine $TVaR_{0.95}$. _____

Answer:

✗

Text input box

Incorrect
Correct answer: 6841.8
Marks for this submission: 0/1.

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